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EXTERNALLY CLOCKED ELECTRICAL FUSE PROGRAMMING WITH ASYNCHRONOUS FUSE SELECTION

ABSTRACT

Embodiments are provided in which a method and an apparatus for sequentially programming electrical fuses are described. A fuse pointer is advanced to point to (i.e., select) the fuses sequentially. When the fuse pointer reaches (i.e., points to) a fuse that is not to be blown, the fuse pointer automatically and asynchronously (e.g. not synchronized to a programming clock signal) skips the fuse. On the other hand, when the fuse pointer reaches a fuse that is to be blown, the fuse pointer stops and the fuse is blown synchronously (e.g., in response to the programming clock signal). After the blow, the fuse pointer advances to the next fuse and the process described above repeats, until the last fuse is programmed. A fuse latch circuit associated with the blown fuse may be optionally reset prior to advancing the fuse pointer.